

1.0 INTRODUCTION

URS Corporation (URS) has been contracted by the U.S. Army Corps Engineers (USACE), to prepare Management Plans to conduct a post removal investigation of the sediments in the Columbia River in the forebay of Bonneville Dam. The work was conducted under Contract DACW57-99-D-0005 Delivery Order No. 0004, Modification 06. The Management Plans provide some background information about the site, describe the objectives, approach, methodology, and activities to be performed for conducting the post removal investigations.

The Bonneville Dam is located on the Columbia River at river mile 146.1, approximately 40 miles east of Portland, Oregon (Figure 1-1). It is a multipurpose project that consists of the first and second powerhouses, the old and new navigation locks and a 1,600,000 cubic feet per second (cfs) capacity spillway (USACE, 2000). Figure 1-2 depicts the Bonneville Dam details. Figure 1-3 is an aerial photograph of the dam and vicinity.

Bradford Island Landfill is a former waste disposal site at the Bonneville Lock and Dam Project on the Oregon side of the river. The landfill was used from the early 1940s until the early 1980s. The USACE, which owns the landfill, is investigating the site under the oversight of the Oregon Department of Environmental Quality (DEQ), through the Voluntary Cleanup Program (VCP). Completed investigations at the site include upland and in-water studies.

As part of the investigation of the landfill, hydrographic and underwater dive surveys were conducted in October and November 2000. The surveys identified waste-related items submerged in the Columbia River, just offshore of the landfill. Additional in-water investigations were conducted in May 2001. The waste-related items were removed in February and March 2002.

1.1 INVESTIGATION OBJECTIVES

The detailed Statement of Work (SOW dated June 27, 2002) provided to URS by the USACE required preparation of plans to investigate the nature and extent of contamination in the Bonneville forebay area, due to the presence of the former waste-related items. The SOW also specified the development of a conceptual site model (CSM) and an evaluation of the construction history of Goose Island to help establish appropriate reference sampling locations. The CSM is discussed in Section 4.0. A Technical Memorandum describing the construction history of Goose Island is provided in Appendix A.

The objectives of this stage of the investigation are to:

- Collect data to estimate the nature and extent of sediment impacts
- Refine the conceptual model, especially to determine the upstream contributions to sediment impacts, and to define preliminary contaminants of interest (PCOIs)
- Collect data necessary for completion of the human health and ecological risk assessments

The results of this investigation will be used to make decisions for additional investigations based on the presence of chemicals identified in the sediment and their concentration as compared with screening concentrations. The chemical screening will be completed as part of risk assessments that are not part of this study.

Future work conducted at this site could include:

- Classifying hot spots and ranking areas with sediment impacts within the forebay
- Establishing target remediation objectives

1.2 FORMAT AND PURPOSE

This Work Plan summarizes the activities planned, introduces the project team and their responsibilities, and provides the schedule for the work.

The document has been divided into nine sections to facilitate a comprehensive discussion of the site background, previous work and activities and their bearing on future work, and the rationale for and implementation of this investigation. Background and site feature information is presented in Section 2.0. A summary of the previous investigations is presented in Section 3.0. The conceptual site model is provided described in Section 4.0. An overview of the investigation process and a data needs evaluation is provided in Section 5.0. A description of the data management and quality assurance review process is discussed in Section 6.0. Section 7.0 includes a discussion of site access requirements and introduces key team members. A tentative schedule for the investigation is provided in Section 8.0. A list of references is provided in Section 9.0.

This Work Plan is one of four documents that make up the Management Plan for this investigation. In addition to the Work Plan, a Sampling and Analysis Plan (SAP) consisting of the Field Sampling Plan (FSP) and the Quality Assurance Project Plan (QAPP) have been prepared to provide detailed instructions for field sampling and laboratory procedures. A Dive Safety Plan will be prepared by the diving contractor to address issues specific to diving operations. The Accident Prevention Plan (APP) establishes policies and procedures to reduce exposure to workers and prevent accidents and is also part of the Management Plan (URS, 2000).